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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/684,616 | 10/10/2000 | Takashi Hashimoto | 198427US2 | 2258 |

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EXAMINER

NGUYEN, JIMMY H

ART UNIT PAPER NUMBER

2673

DATE MAILED: 10/03/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

1/6

Office Action Summary

Application No.

09/684,616

Applicant(s)

HASHIMOTO ET AL.

Examiner

Jimmy H. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 October 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 6-11 is/are rejected.
- 7) ☒ Claim(s) 3-5 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2-4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

This application has been examined. The original claims 1- 11 are pending. The examination results are as following:

Information Disclosure Statement

1. The information disclosure statements (IDSs) submitted on 01/09/2001, 02/26/02 and 07/30/2002 and respectively entered as paper No. 2-4 are considered by the examiner, except that the first related case listed in IDS paper No. 3 is crossed out because it is the pending application.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the claimed features, "t strip portions of an address electrode" and "t strip portions of a scan electrode" recited in claims 1, 9 and 10, and "successively selecting one of said strip portions of said scan electrodes paired with said strip portions supplied with said first voltage" recited in claim 6, lines 6-8, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

3. Figures 10-13 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

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4. Claim 1 is objected to because of the following informalities:

i. line 13, insert -- comprising -- immediately after “method”, so as to imply that “applying a prescribed voltage to said strip portions of said address electrode in common” is just a step of the claimed method, and ✓

ii. line 15, change “potions” to -- portion --, due to a typographical error. ✓

Appropriate correction is required.

5. Claim 3 is objected to because of the following informalities: line 4, change “sustain” to -- scan --, so as to be consistent with the specification, page 23, lines 7-13. Appropriate correction is required. ✓

6. Claim 4 is objected to because of the following informalities: line 2, insert -- further comprising -- immediately before “setting”, so as to imply that “setting said second potential difference substantially to zero” is just a step of the claimed method. Appropriate correction is required. ✓

7. Claim 5 is objected to because of the following informalities: line 2, insert -- further comprising -- immediately before “successively”, so as to imply that “successively ... electrode”, lines 2-5, is just a step of the claimed method. Appropriate correction is required. ✓

8. Claim 6 is objected to because of the following informalities: line 6, insert -- further comprising -- immediately before “successively”, so as to imply that “successively ... voltage”, lines 6-8, is just a step of the claimed method. Appropriate correction is required. ✓

9. Claim 7 is objected to because of the following informalities: line 2, insert -- further comprising -- immediately before “forming”, so as to imply that “forming ... electrode”, lines 2-4, is just a step of the claimed method. Appropriate correction is required.

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10. Claim 8 is objected to because of the following informalities: line 2, insert -- further comprising -- immediately before “forming”, so as to imply that “forming ... electrode”, lines 2-4, is just a step of the claimed method. Appropriate correction is required. ✓

11. Claim 9 is objected to because of the following informalities: line 5, delete “of”, due to a typographical error. Appropriate correction is required.

12. Claim 10 is objected to because of the following informalities: line 17, change “portions” to -- portion --, due to a typographical error. Appropriate correction is required. ✓

13. It is in the best interest of the patent community that applicant, in his/her normal review and/or rewriting of the claims objected above, to take into consideration these editorial situations and make changes as necessary.

Claim Rejections - 35 USC § 112

14. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

15. Claims 6-8 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

As per claims above, the application does not describe in detail in the specification and in the drawing the claimed limitation, “successively selecting one of said strip portions of said scan electrodes paired with said strip portions supplied with said first voltage” (see claim 6, lines 6-8). As noting in figures 2-3 and the corresponding description, applicants only describe the voltage

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waveform applied to the row electrode Xi. Therefore, these claims are rejected for the reason as set forth above.

Claim Rejections - 35 USC § 103

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

17. Claims 1, 2 and 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicants' Admitted Prior Art, hereinafter AAPA.

As per claims above, as noting in figure 10 and the corresponding description, AAPA discloses a plasma display device comprising an AC plasma display panel (PDP), which comprises a column electrode (108) (corresponding to the claimed address electrode) obviously including t strip portions (i.e., each portion extending between two adjacent row electrodes (104) and including a display area and a non-display area is obviously considered as the claimed strip portion, see page 3, line 20 through page 4, line 5), t discharge cells having discharge gaps (DG) (each cell occupying a discharge area, see page 3, lines 22-23), a row electrode (104) (corresponding to the claimed scan electrode) obviously including t strip portions (i.e., each portion between two adjacent barrier ribs (110) is obviously considered as the claimed strip portion of the scan electrode), a row electrode (105) (corresponding to the claimed sustain electrode) obviously including t strip portions (i.e., each portion between two adjacent barrier ribs (110) is obviously considered as the claimed strip portion of the sustain electrode), a dielectric layer (106A) (corresponding to the claimed dielectric substance) and a plurality of non-

X
has it
No

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discharge cells having non-discharge gaps (NG) (page 4, lines 2-4) and a plurality of barrier ribs (110) (corresponding to the claimed barrier ribs), and an inherent driving circuit (corresponding to the claimed driving unit) for supplying voltage waveforms to electrodes, thereby driving PDP.

Furthermore, as noting in figure 10, all strip portions of the row electrode (104) are integrated to form a single strip electrode, and all strip portions of the address electrode (108) are integrated to form a single column electrode so that at least two adjacent ones of strip portions are integrated with each other extending over non-discharge cells and discharge cells separated by the barrier

ribs. Further, as noting in figure 13 and the corresponding description, AAPA discloses a PDP driving method comprising applying a voltage (V_wD) (corresponding to the claimed prescribed

voltage to said strip portions of said address electrode in common) to the strip portions of the column electrode (W_j) in common, applying a scan voltage (V_{xg}) (corresponding to the claimed prescribed voltage to said strip portions of said scan electrode) to all strip portions of the row

electrode (X_1), and applying a subscan voltage (V_{ysc}) to all strip portions of row electrode (Y) (this considerably implies applying a first voltage (V_{ysc}) to one of said t strip portions of said sustain electrode belonging to a single discharge cell among said t discharge cells while applying a second voltage (V_{ysc}) to remaining all of said strip portions of said sustain electrode) for

performing desired discharged only in said single discharge cell. Accordingly, AAPA obviously discloses the claimed invention as specified in claims above, and these claims are therefore rejected for the reason as set forth above.

Allowable Subject Matter

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18. Claims 3-5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims, and if overcome the objection above.

19. The following is a statement of reasons for the indication of allowable subject matter: the claimed invention is directed to a method of driving an AC PDP. The dependent claim 3 identifies the uniquely distinct feature “a first potential difference between said strip portion of said sustain electrode supplied with said first voltage and said strip portion of said scan electrode paired with said strip portion supplied with said first voltage is larger than a second potential difference between said strip portion of said sustain electrode supplied with said second voltage and said strip portion of said scan electrode paired with said strip portion supplied with said second voltage”. The dependent claim 5 identifies the uniquely distinct feature “successively selecting one of said t strip portions of said sustain electrode and applying said first voltage while applying said second voltage to remaining all of said strip portions of said sustain electrode in a period when said prescribed voltage is applied to said scan electrode”. The closest art, AAPA, as discussed above, obviously discloses the first potential difference being the same as the second potential difference and applying the first voltage to one of the strip portions of the sustain electrode while applying the second voltage to remaining all of said strip portions of said sustain electrode in a period when said prescribed voltage is applied to said scan electrode, either singularly or in combination, fails to anticipate or render the above underlined limitations obvious.

Conclusion

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20. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Gay et al. (USPN: 5,086,257) disclose a related PDP comprising a plurality of discharge cells (PX1 ... PX4 on the first display line) and a plurality of non-discharge cells (Cs) (fig. 1). Nagaoka et al. (USPN: 5,874,932) discloses a related PDP device and an associate method of driving the PDP comprising applying a voltage (Va) to strip portions of the address electrode in common, applying a scan voltage (Vy) to strip portions of said scan electrode (Y) and applying a voltage (Vx) to all strip portions of sustain electrode (X) (fig. 5). And, Kuroki et al. (USPN: 5,952,783) disclose a related AC PDP comprising at least two separate strip portions (A1, A2) of address electrode (A) (fig. 4).

21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jimmy H. Nguyen whose telephone number is (703) 306-5422. The examiner can normally be reached on Monday - Thursday, 8:00 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached at (703) 305-4938.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

JHN
September 16, 2002

A handwritten signature in black ink, appearing to read 'Jimmy H. Nguyen', with a long horizontal line extending to the right.

Jimmy H. Nguyen
Examiner
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